

FIG. 1

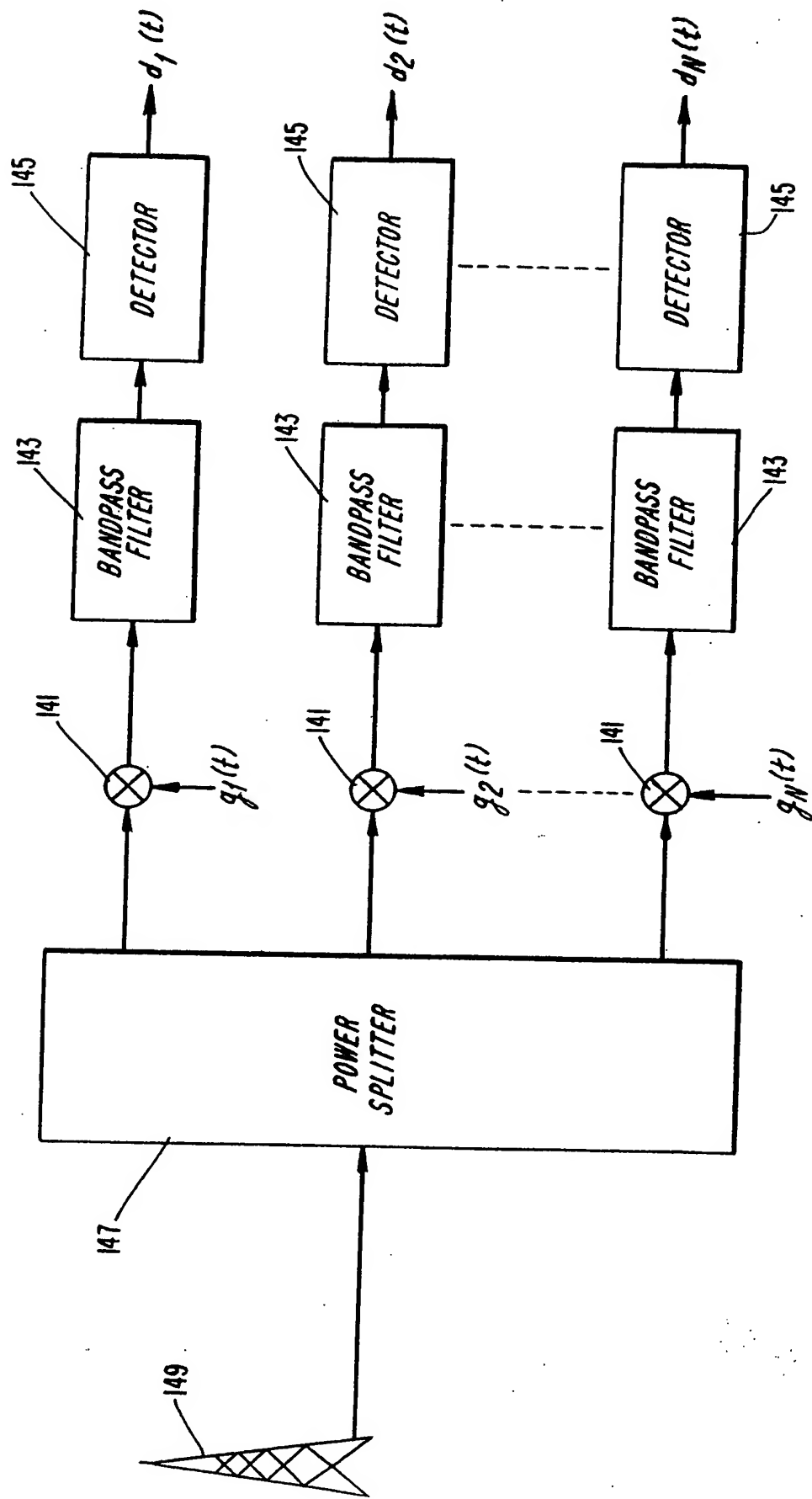
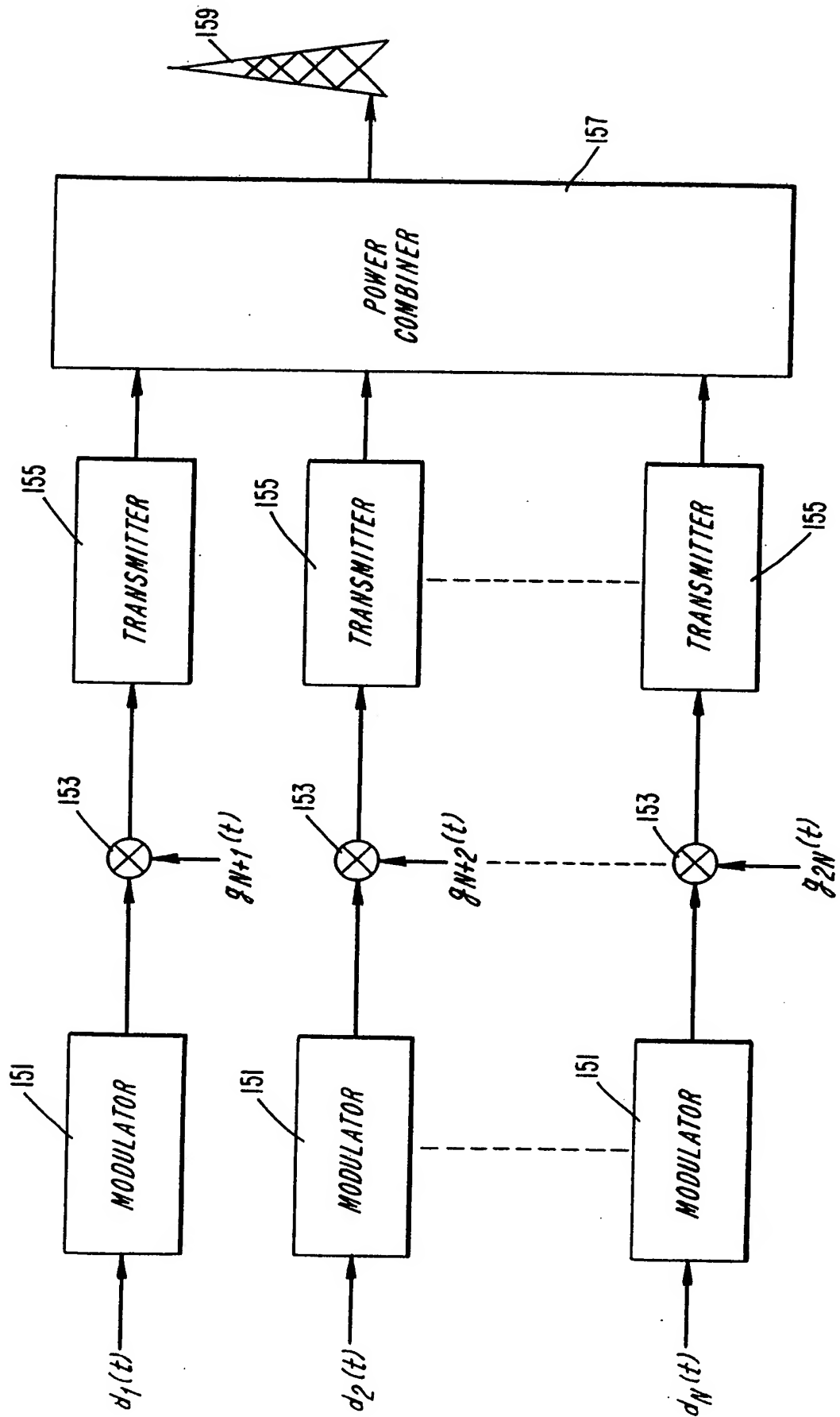
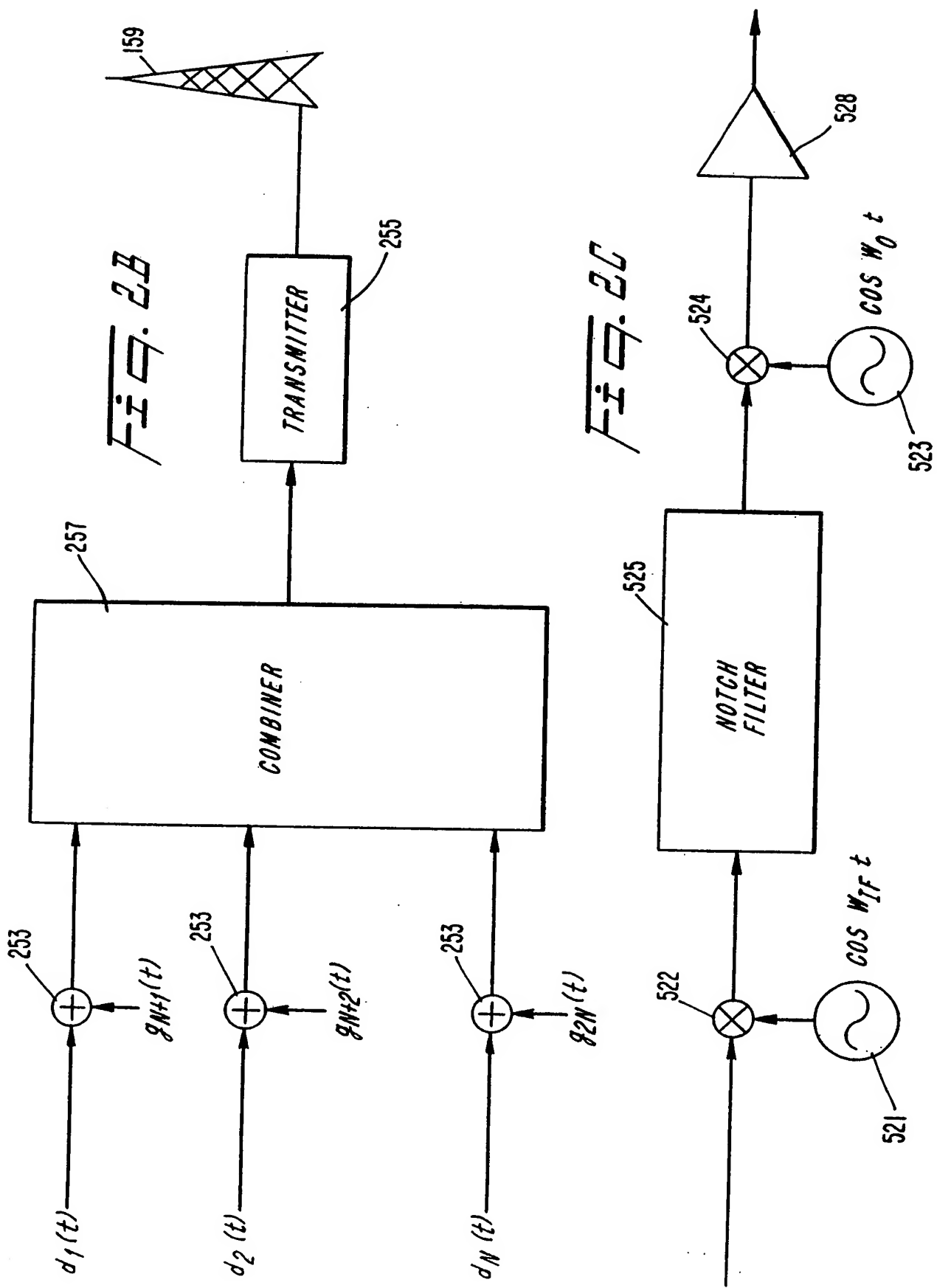


FIG. 2A





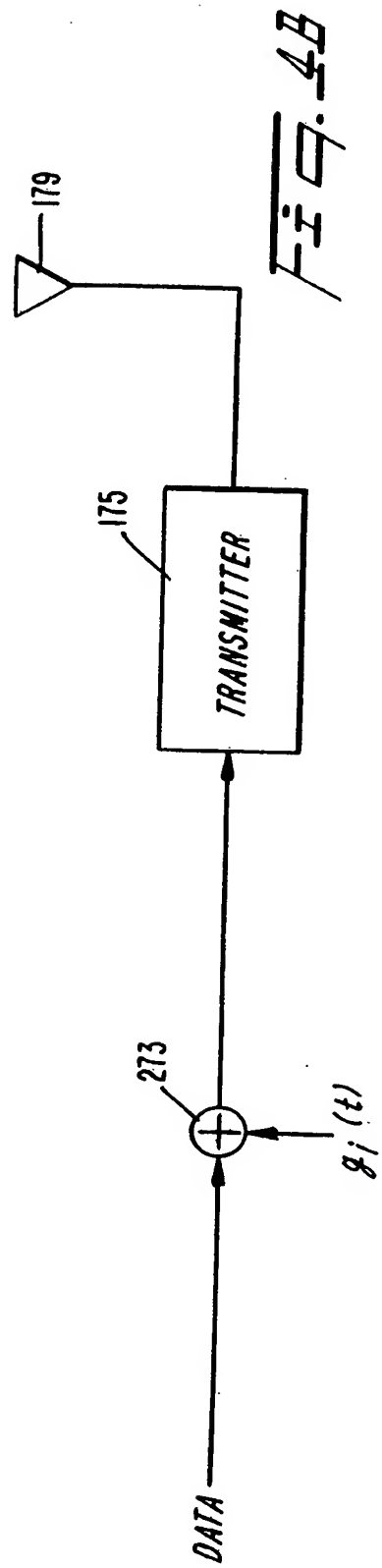
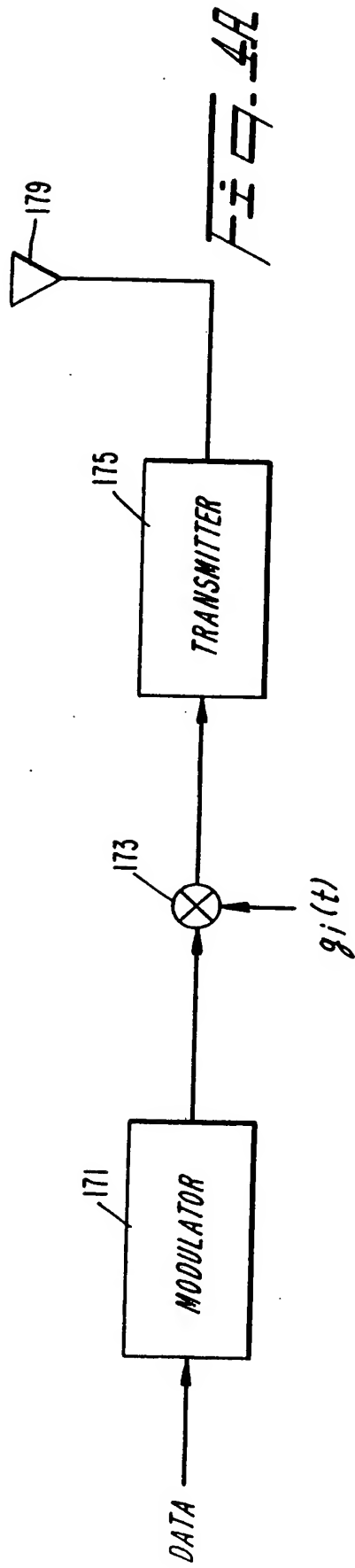
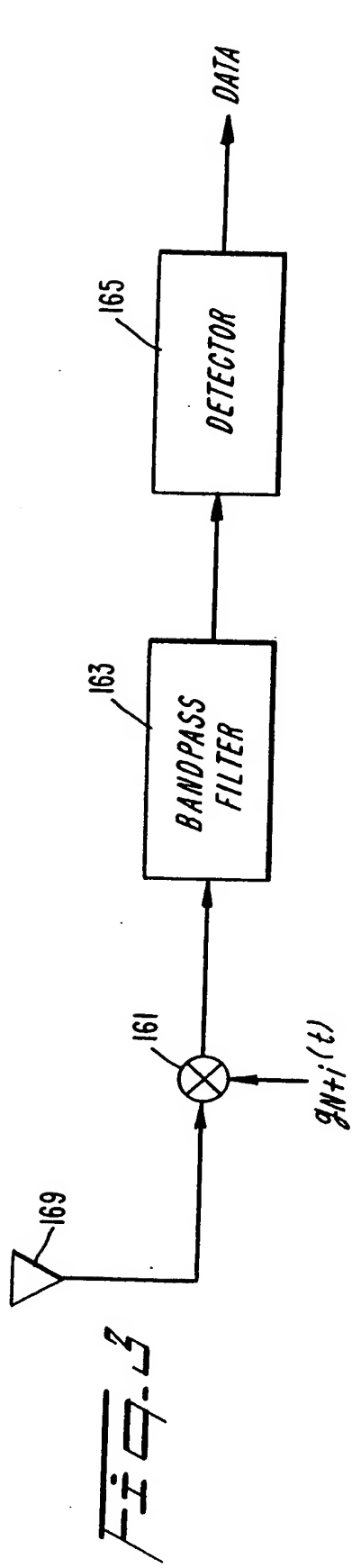


FIG. 4C

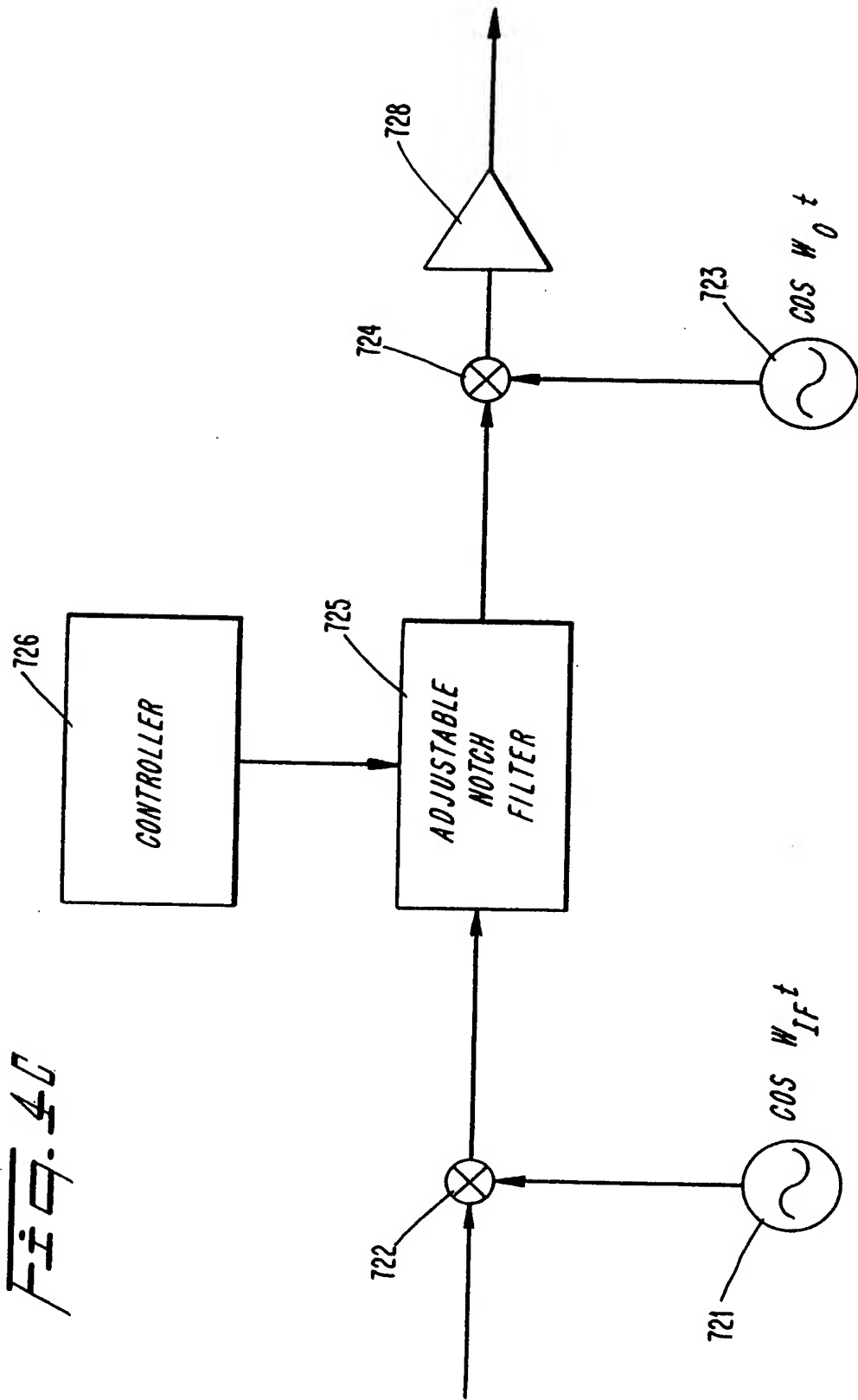


FIG. 5

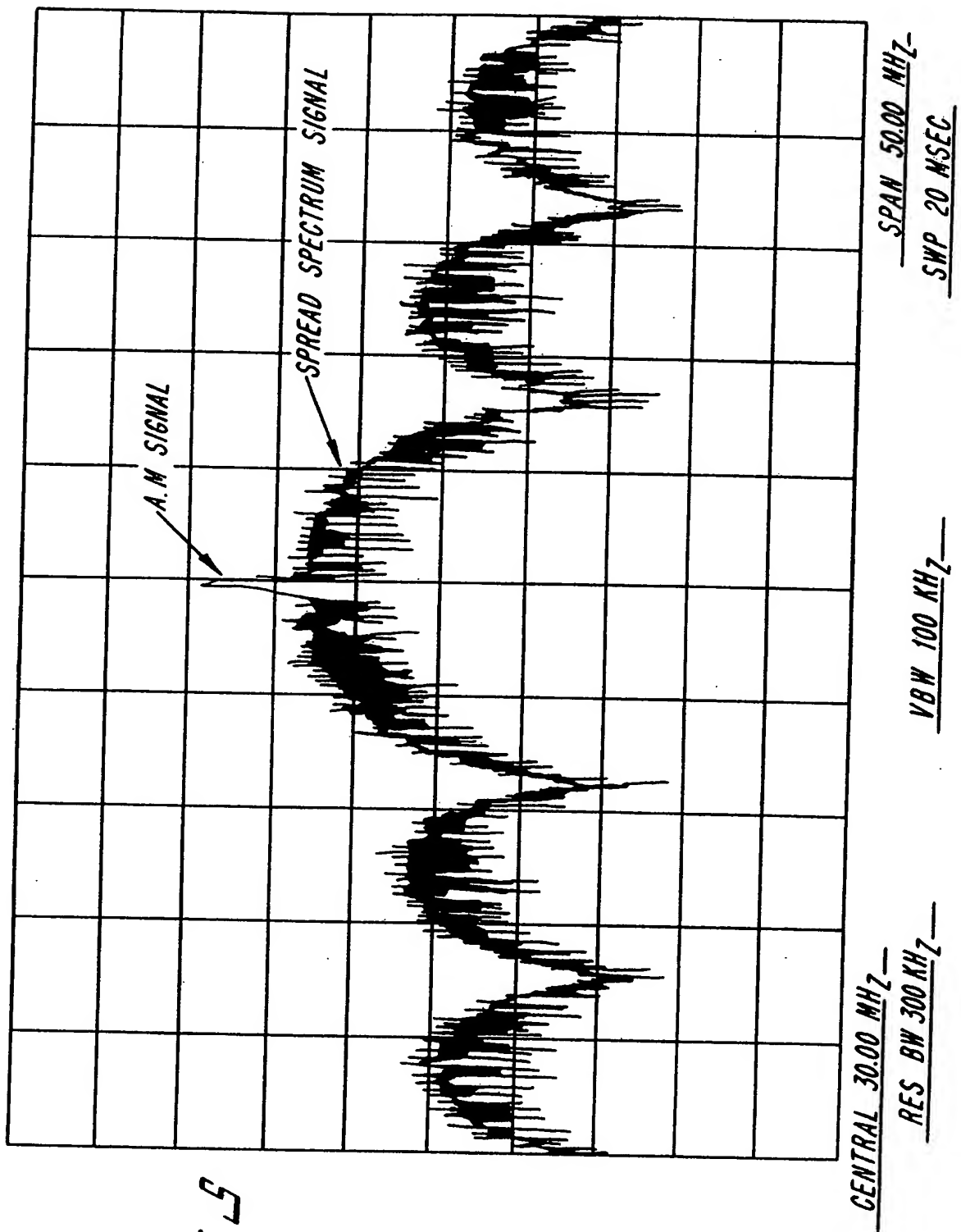


Fig. 6

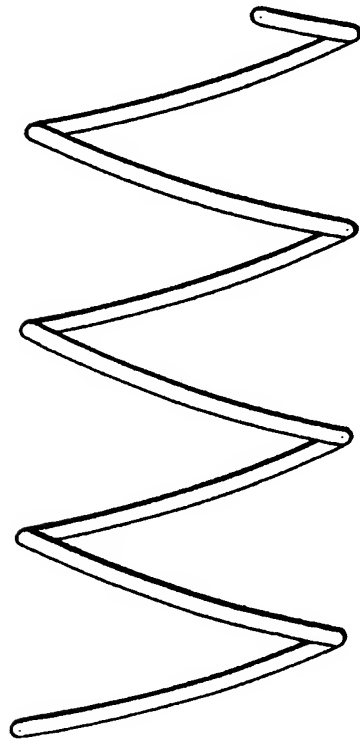
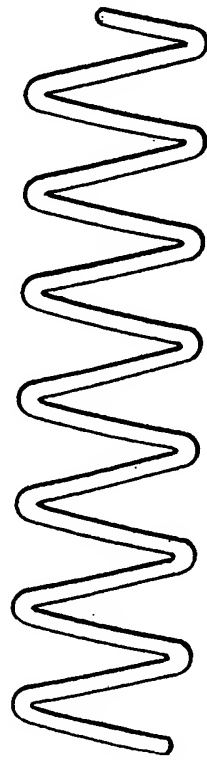


Fig. 7



	$b_0$	$b_1$	-----	$b_{N-1}$							
3	0	1	1								
4	0	0	1	1							
5	0	0	1	0	1						
6	0	0	0	0	1	1					
7	0	0	0	0	1	1					
8	0	1	1	1	0	0	0	1			
9	0	0	0	0	1	0	0	0	1		
10	0	0	0	0	0	1	0	0	1		
11	0	0	0	0	0	0	1	0	1		
12	0	1	0	0	0	0	0	1	1	1	
13	1	0	0	0	0	0	0	1	1	1	
14	0	1	0	0	0	0	0	0	1	1	1
15	0	0	0	0	0	0	0	0	0	1	1

Fig. 9

Fig. 9





**Fig. 10**

PCN MOBILE USER

ANTENNA

MICROCELL

MICROCELL

ANTENNA

MICROCELL CONTROLLER

ANTENNA

MICROCELL

WEATHER MONITOR TELEMETRY

DESK #2

HARDWIRED TO TELE. CO

WIRELESS PBX

SECURITY SENSOR

DESK #1

ANTENNA

MICROCELL

PCN MOBILE USER

PCN MOBILE USER

PCN MOBILE  
USER

**ANTENNA**

**MICROCELL**

**MICROCELL**

**ANTENNA.**

**MICROCELL  
CONTROLLER**

## ANTENNA

**MICROCELL**

**WEATHER  
MONITOR  
TELEMETRY**

**DESK #2**

**HARDWIRED  
TO TELE. CO**

**WIRELESS  
PBX**

**SECURITY  
SENSOR**

DESK #1

**ANTENNA**

**MICROCELL**

PCN  
MOBILE USER

PCN  
MOBILE USER

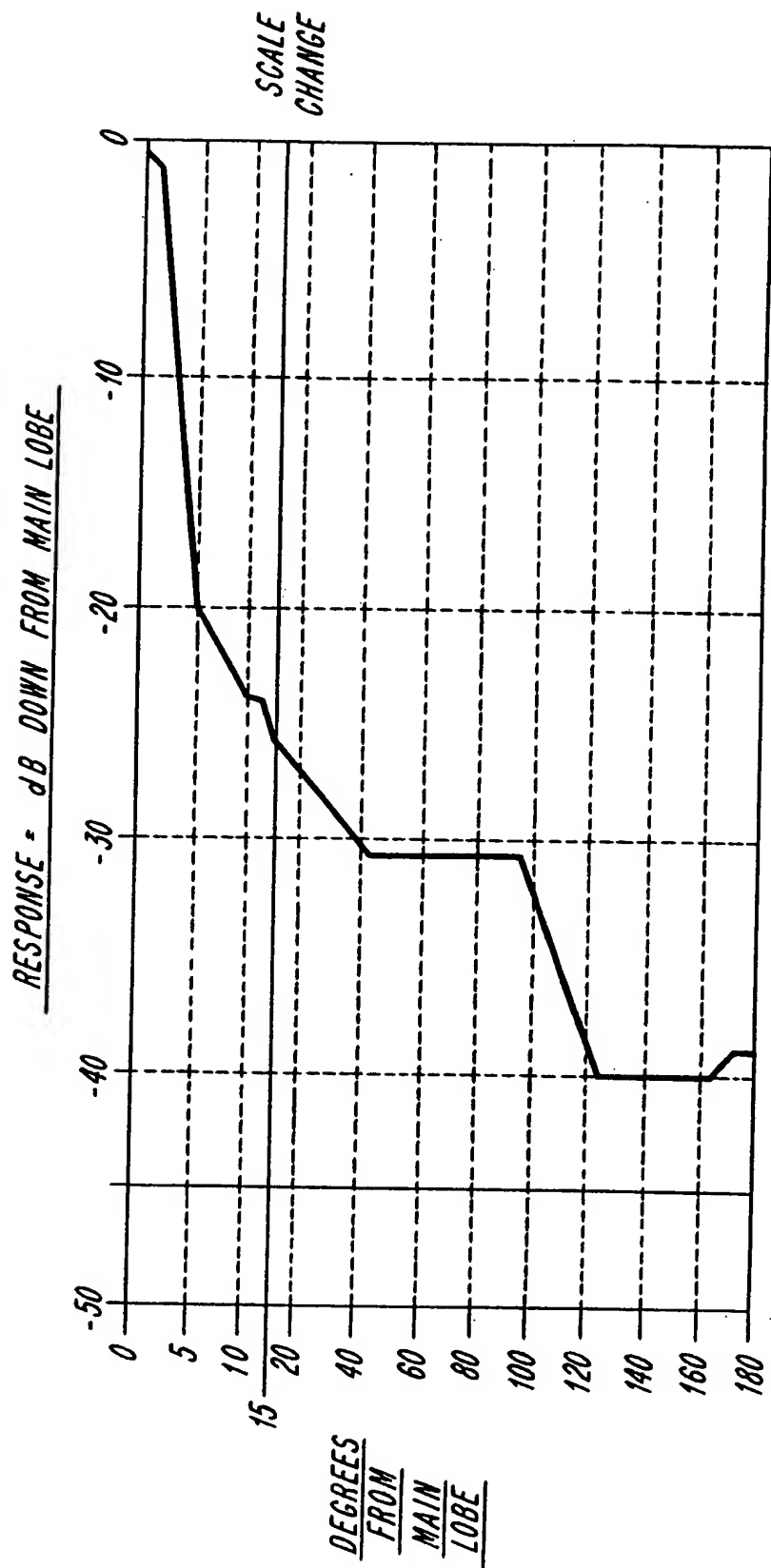


FIG. 12

*Fig. 13A*

BANDWIDTH = 10 MHz

FIXED SERVICE LINK PARAMETERS	
MODULATION	64-QAM
BIT RATE	45 Mb/s
LINK LENGTH	20 MILES
ANTENNA GAIN (2 AM GRID ANTENNA)	30 dB
ANTENNA BANDWIDTH (3-dB POINT)	3.2°
TRANSMIT POWER	0.5 W (27 dBm)
ANTENNA CENTER LINE HEIGHTS	200 FEET (BOTH ENDS)

*Fig. 13B*

S.S. CHIP RATE = 25 Mcps

PCM SYSTEM PARAMETERS	
MODULATION	SPREAD SPECTRUM
ANTENNA GAIN (HALF-WAVE DIPOLE)	2 dB
TRANSMIT POWER	1 mW (0 dBm)

*Fig. 14*

DISTANCE $d$	$P_S / P_I$ + 1 USER dB	$P_S / P_I$ * 10 USERS dB	$P_S / P_I$ * 100 USERS dB
500 FT.	64	54	44
1,000 FT.	66.5	56.5	46.5
3,000 FT.	70.3	60.3	50.3
1 MILE	72.3	62.3	52.3

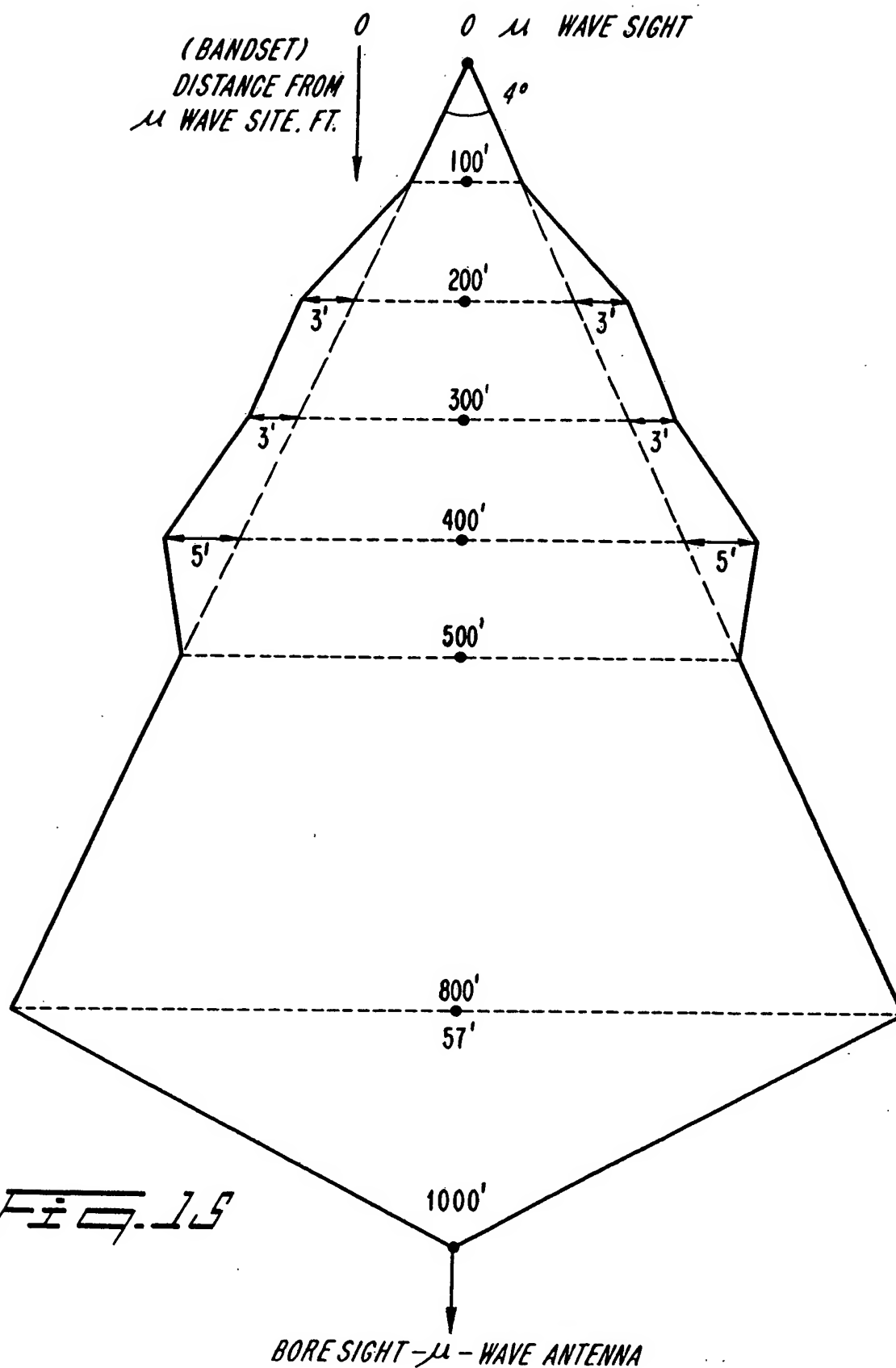
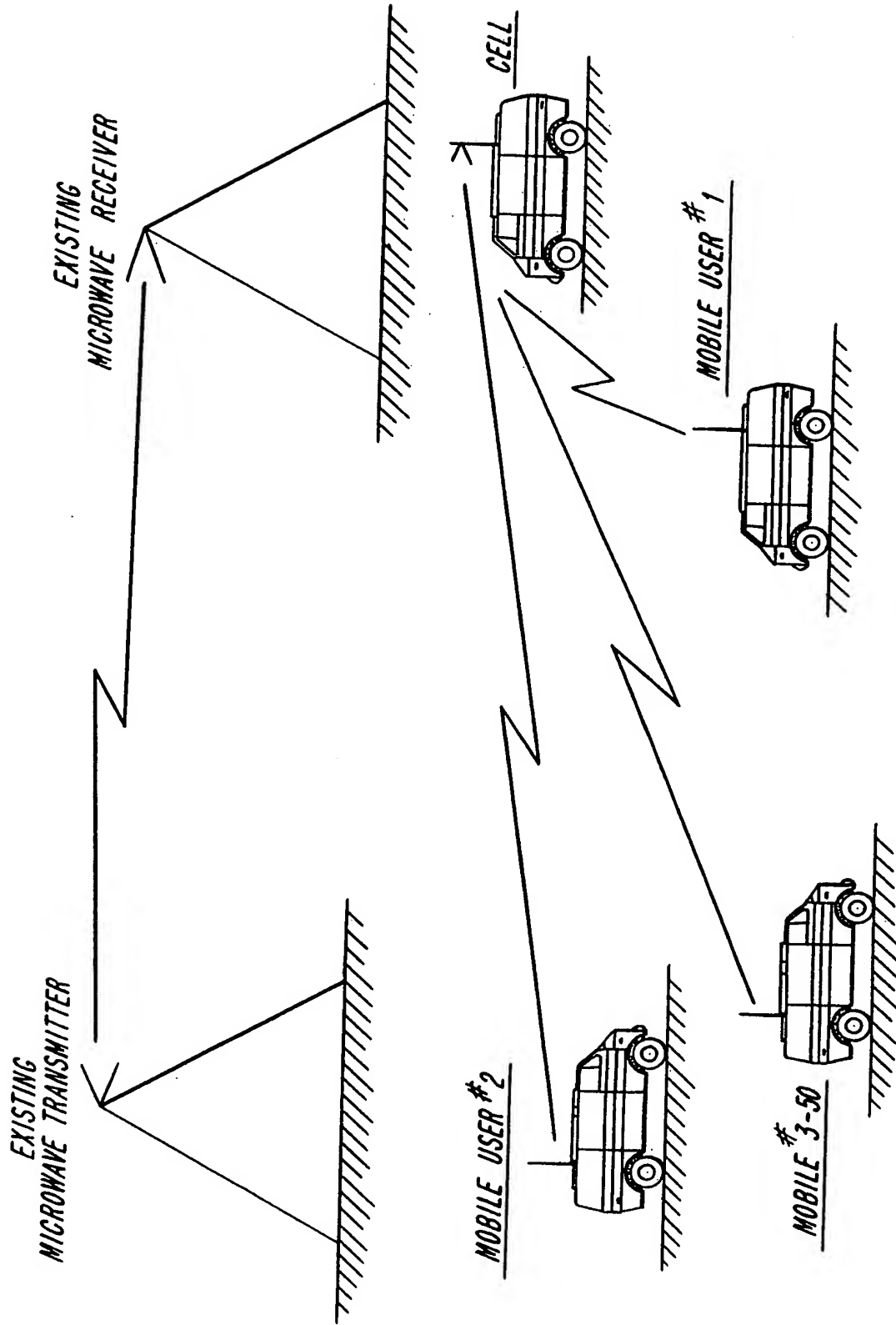


Fig. 15



*Fig. 16*

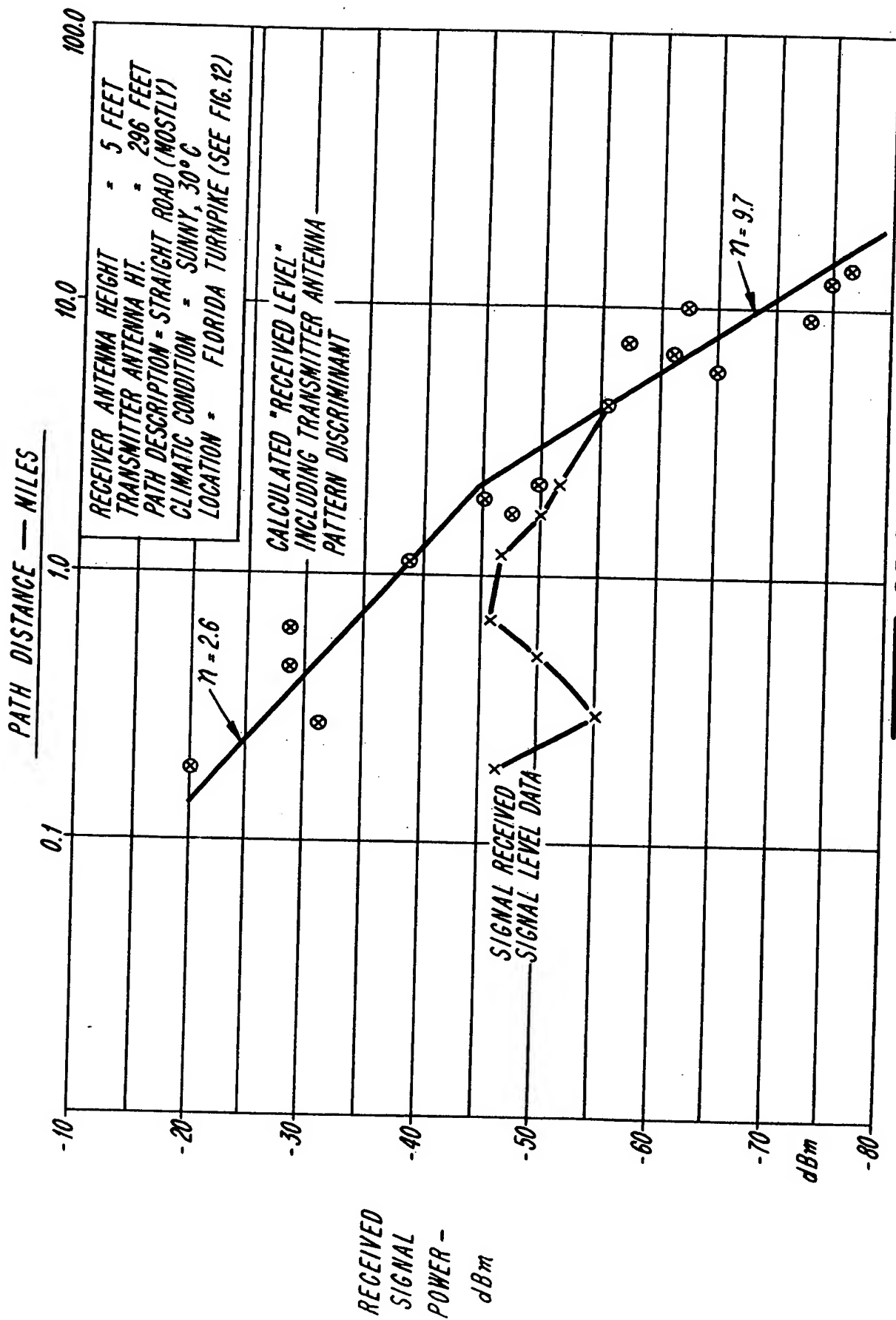


FIG. 17A

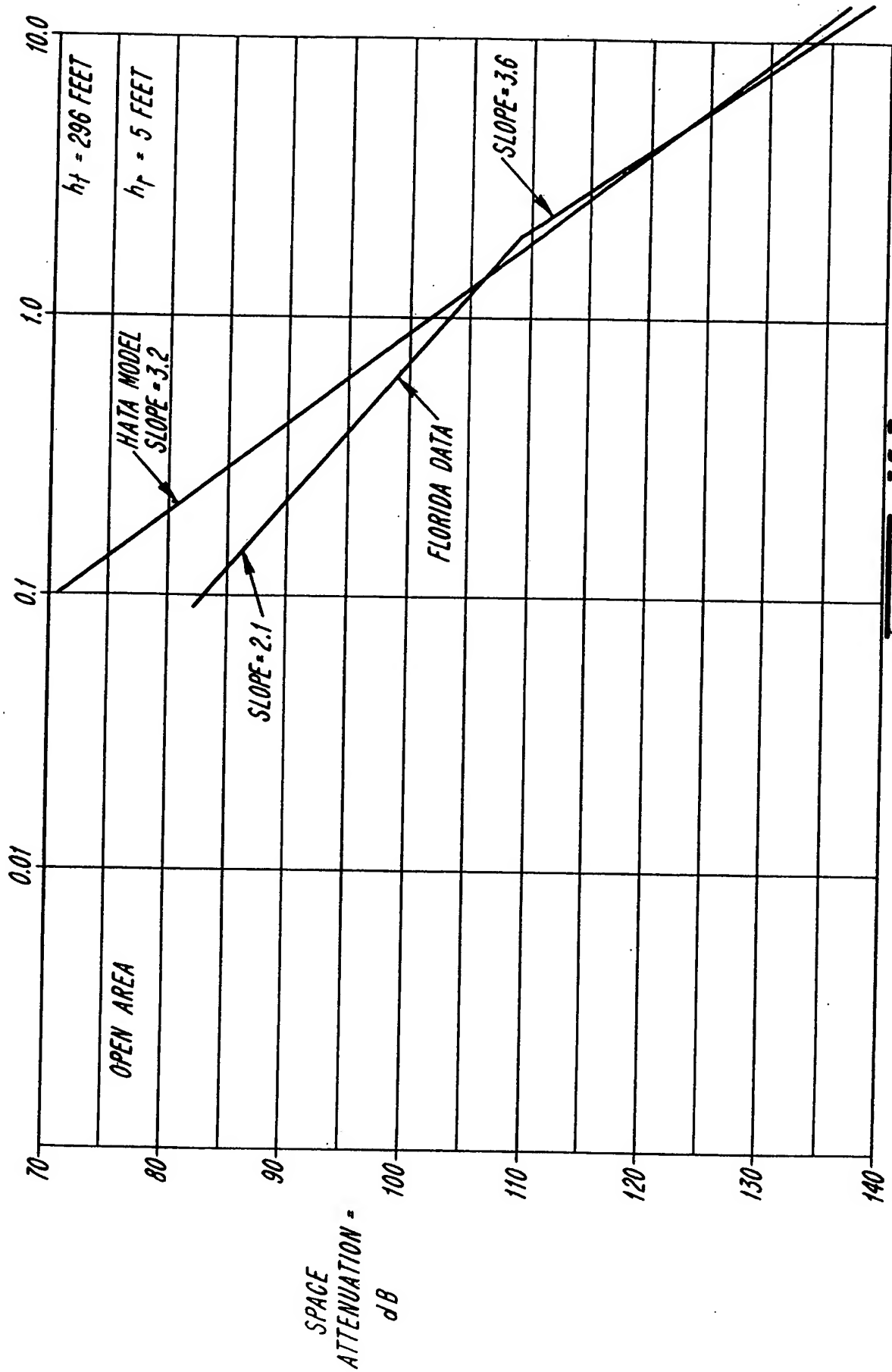


FIG. 17B

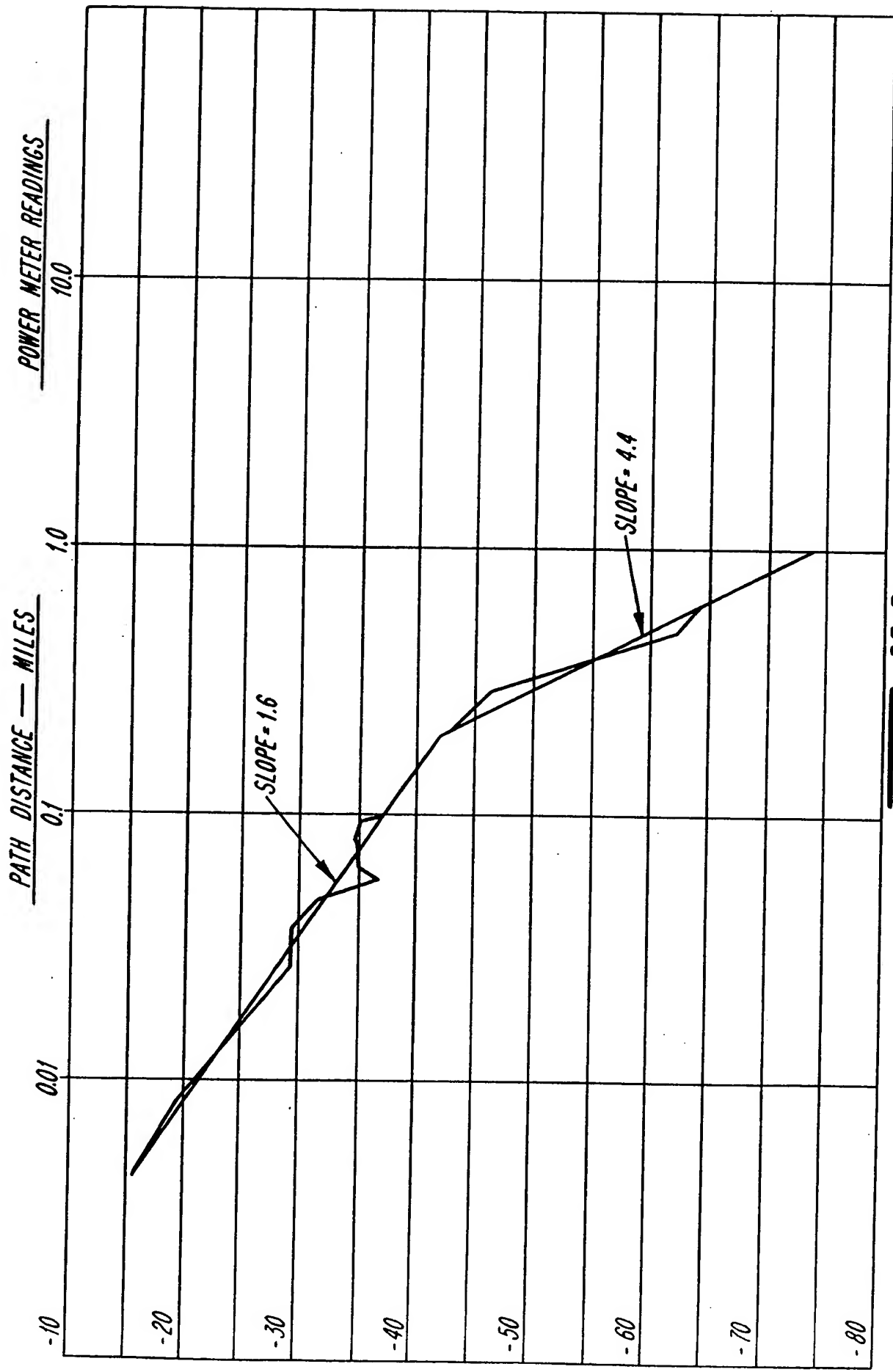


Fig. 170



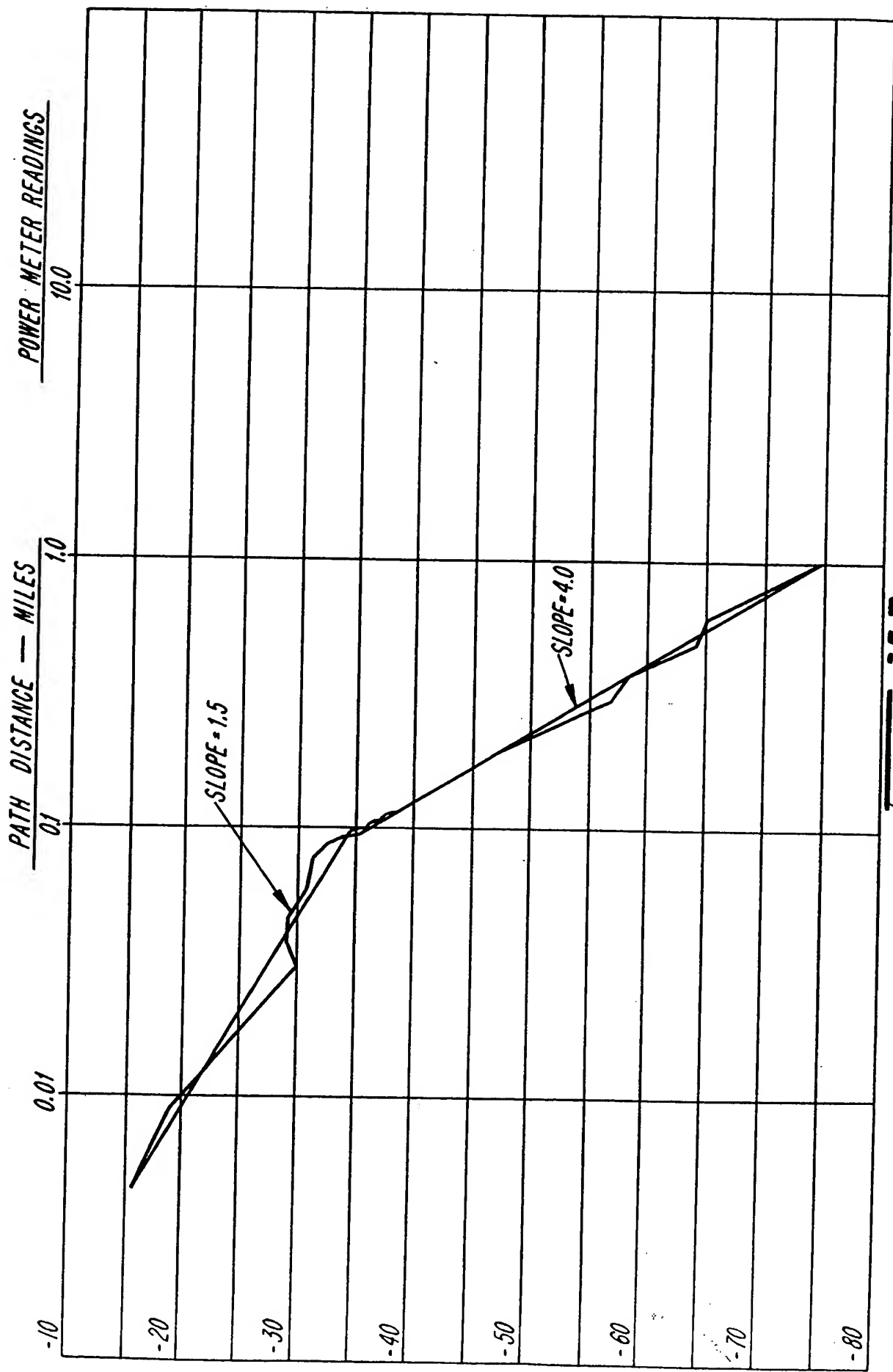


Fig. 17D

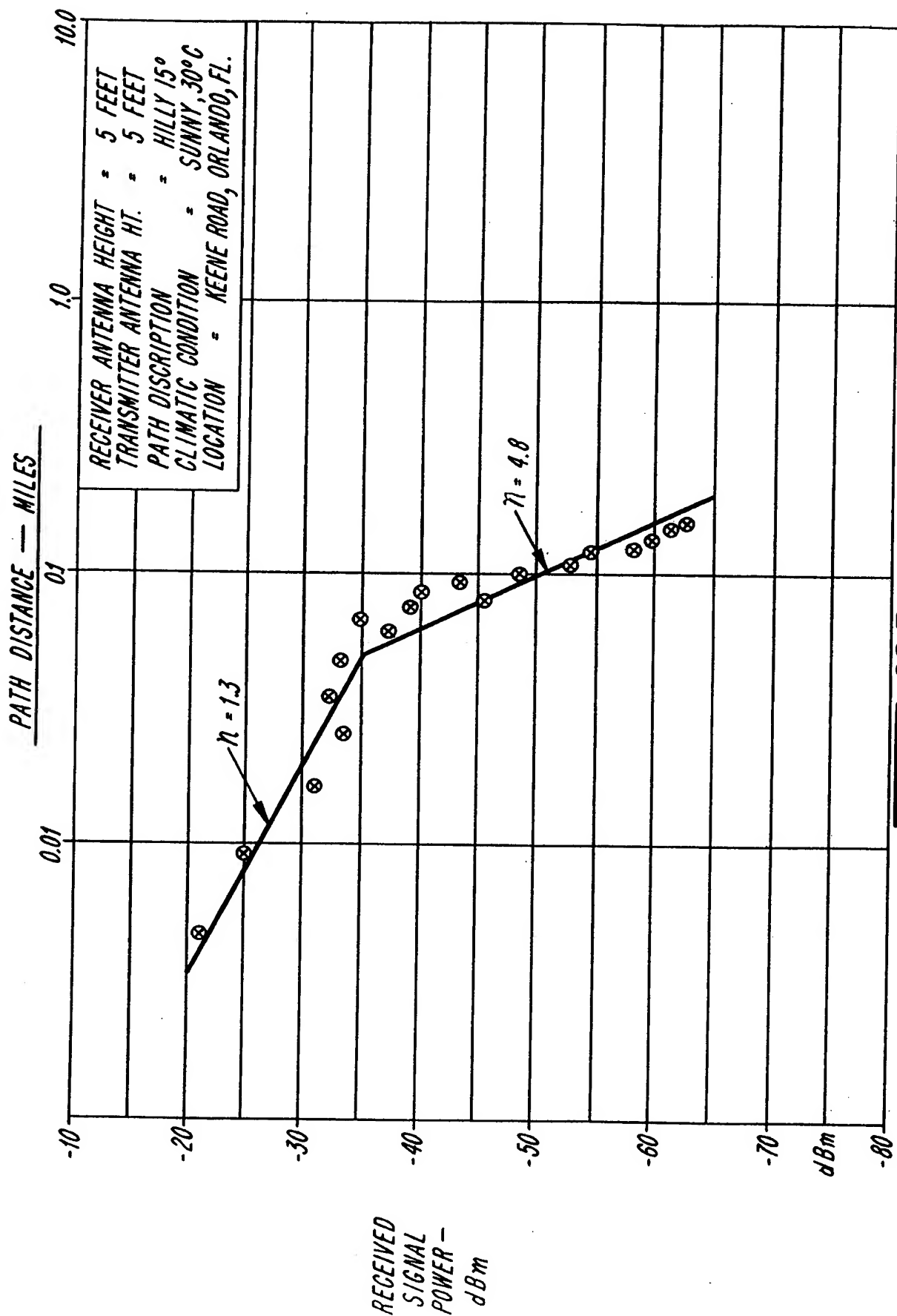


Fig. 17B

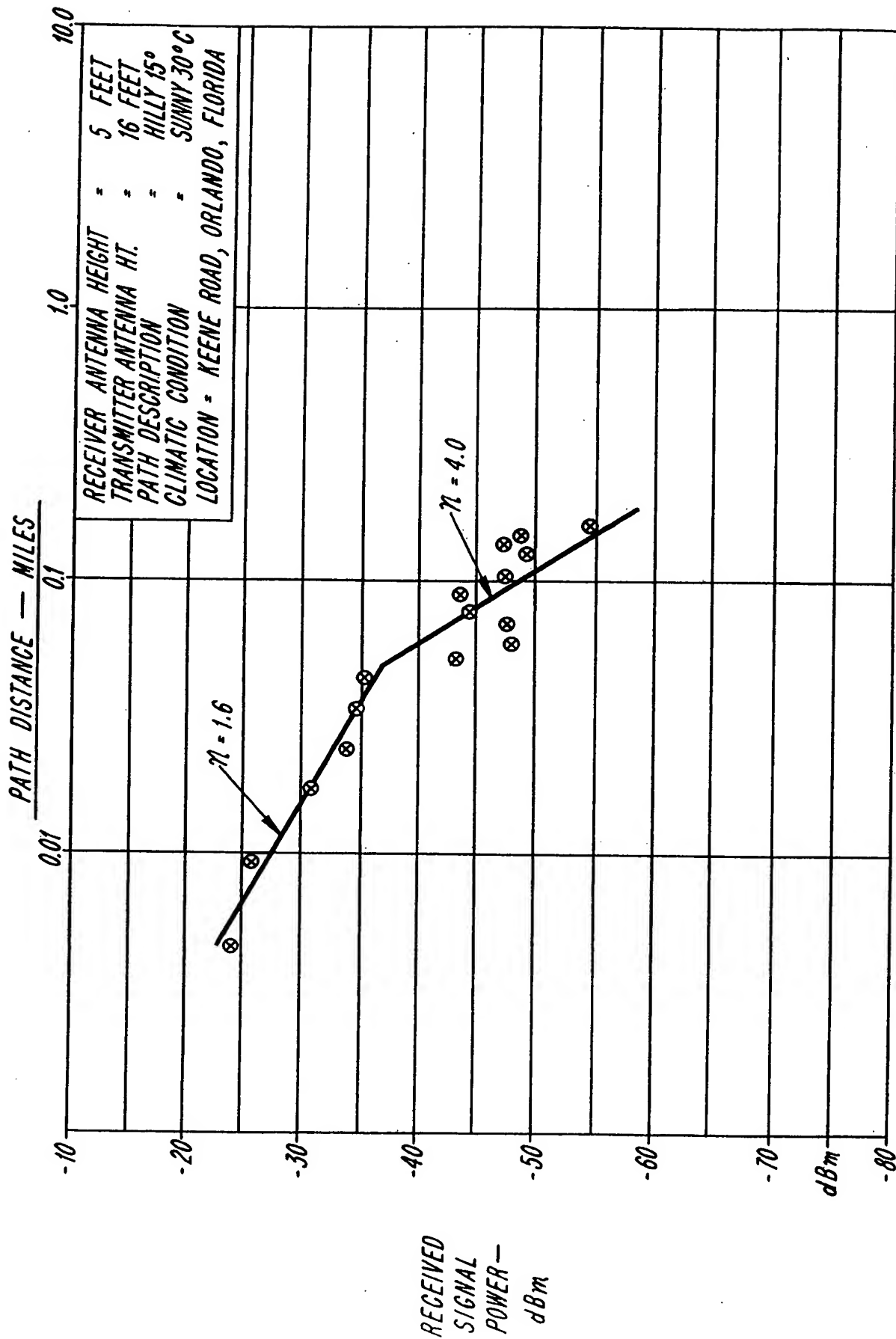


FIG. 17F

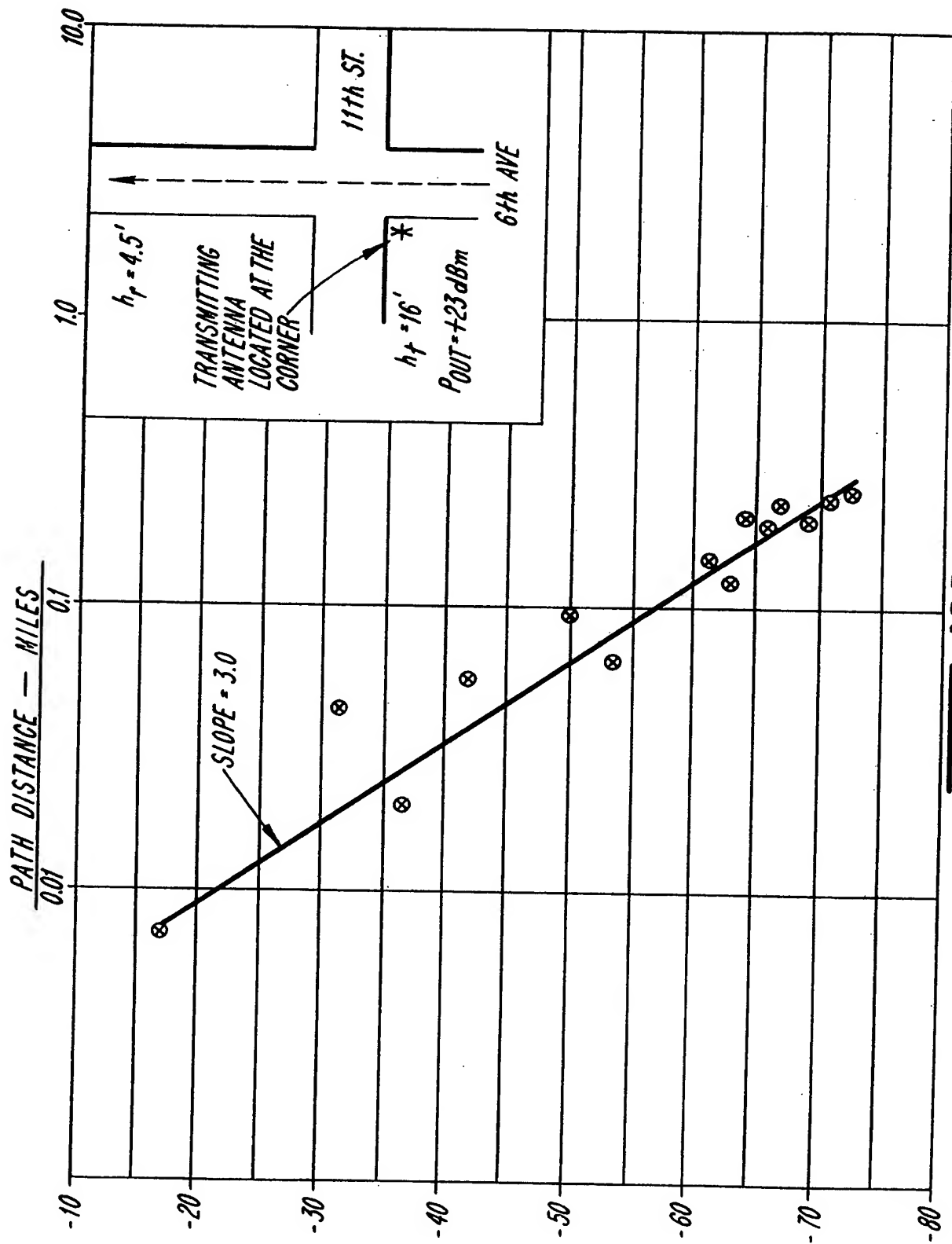


Fig. 176

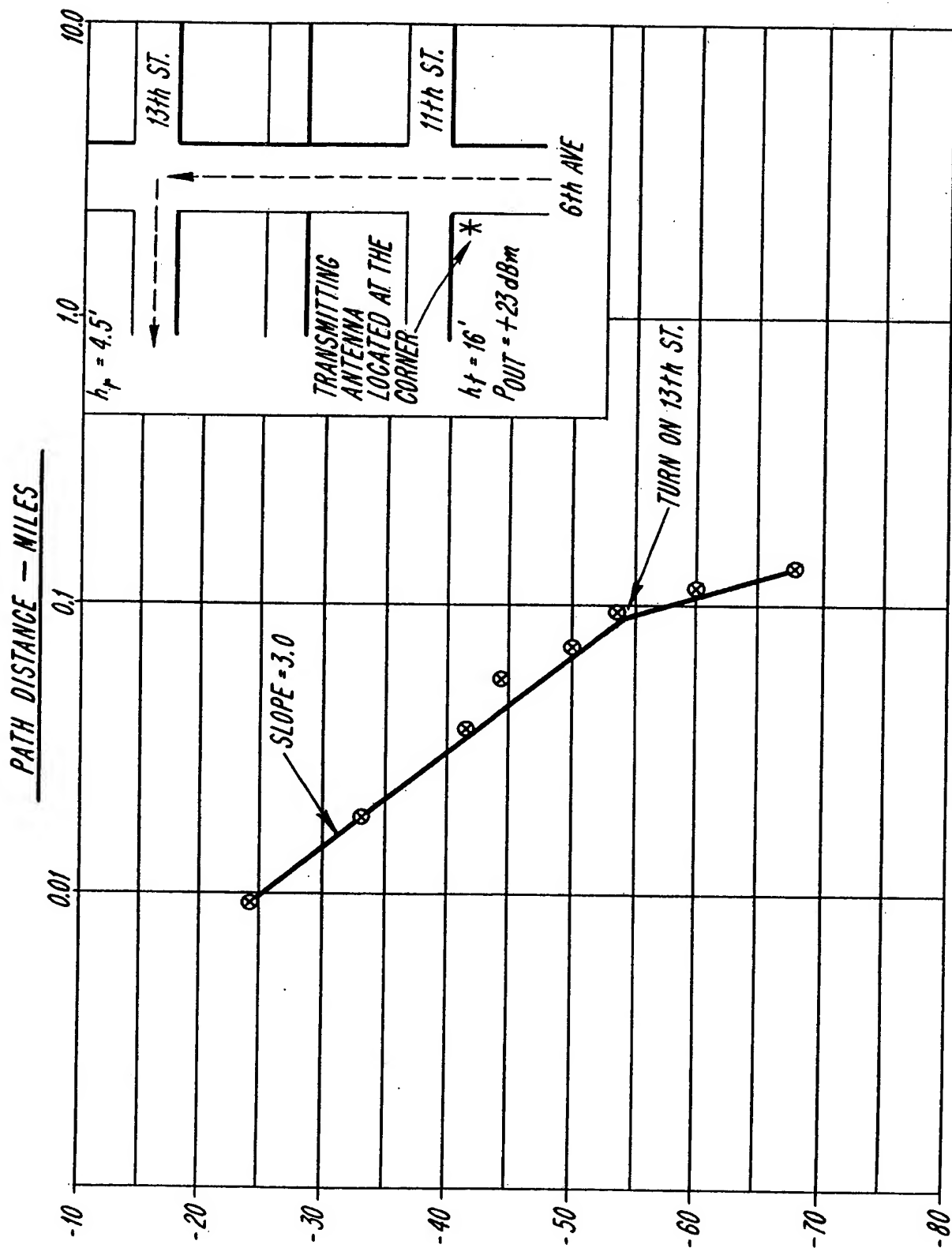


FIG. 17H

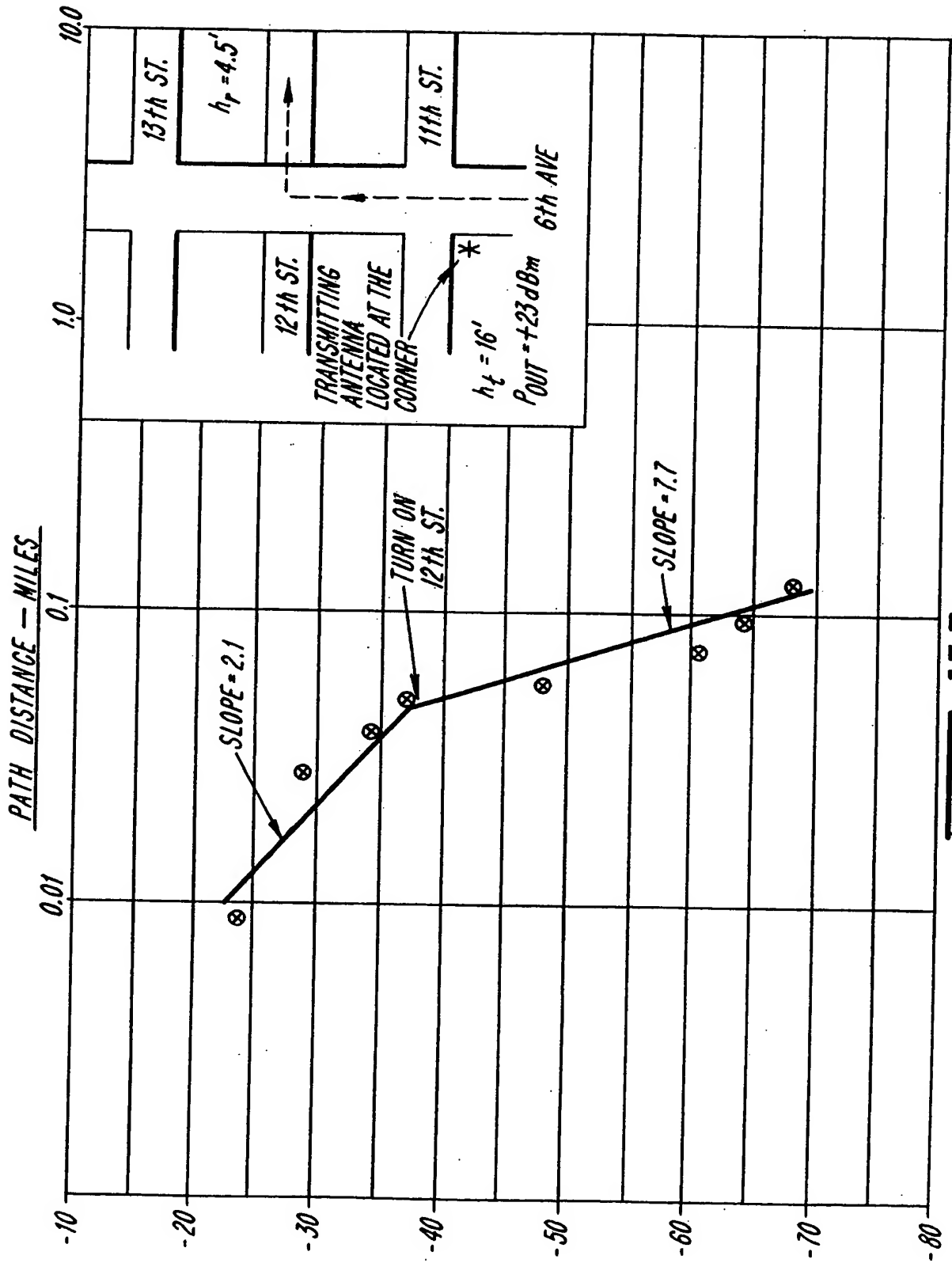


Fig. 171

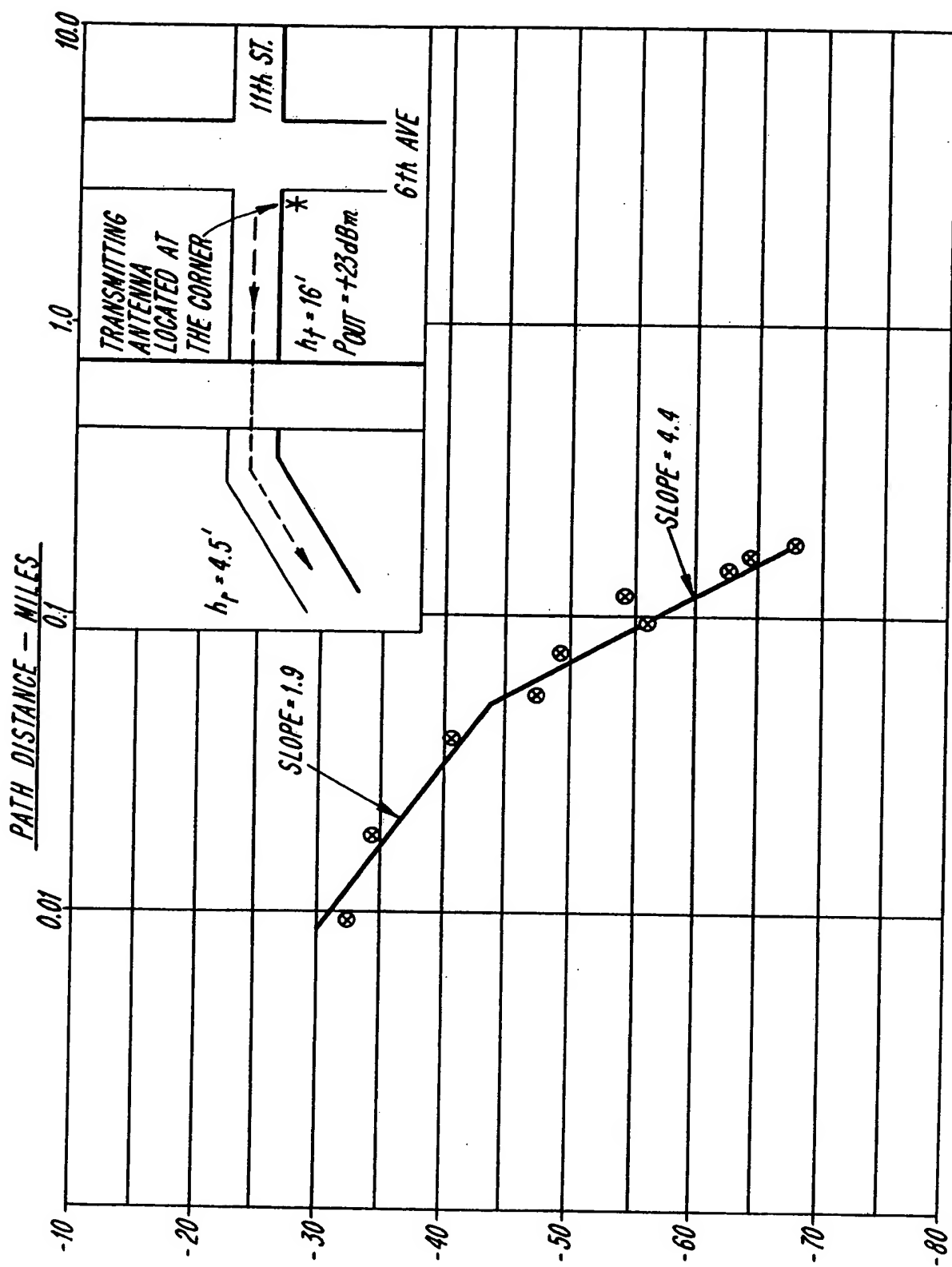


Fig. 17d

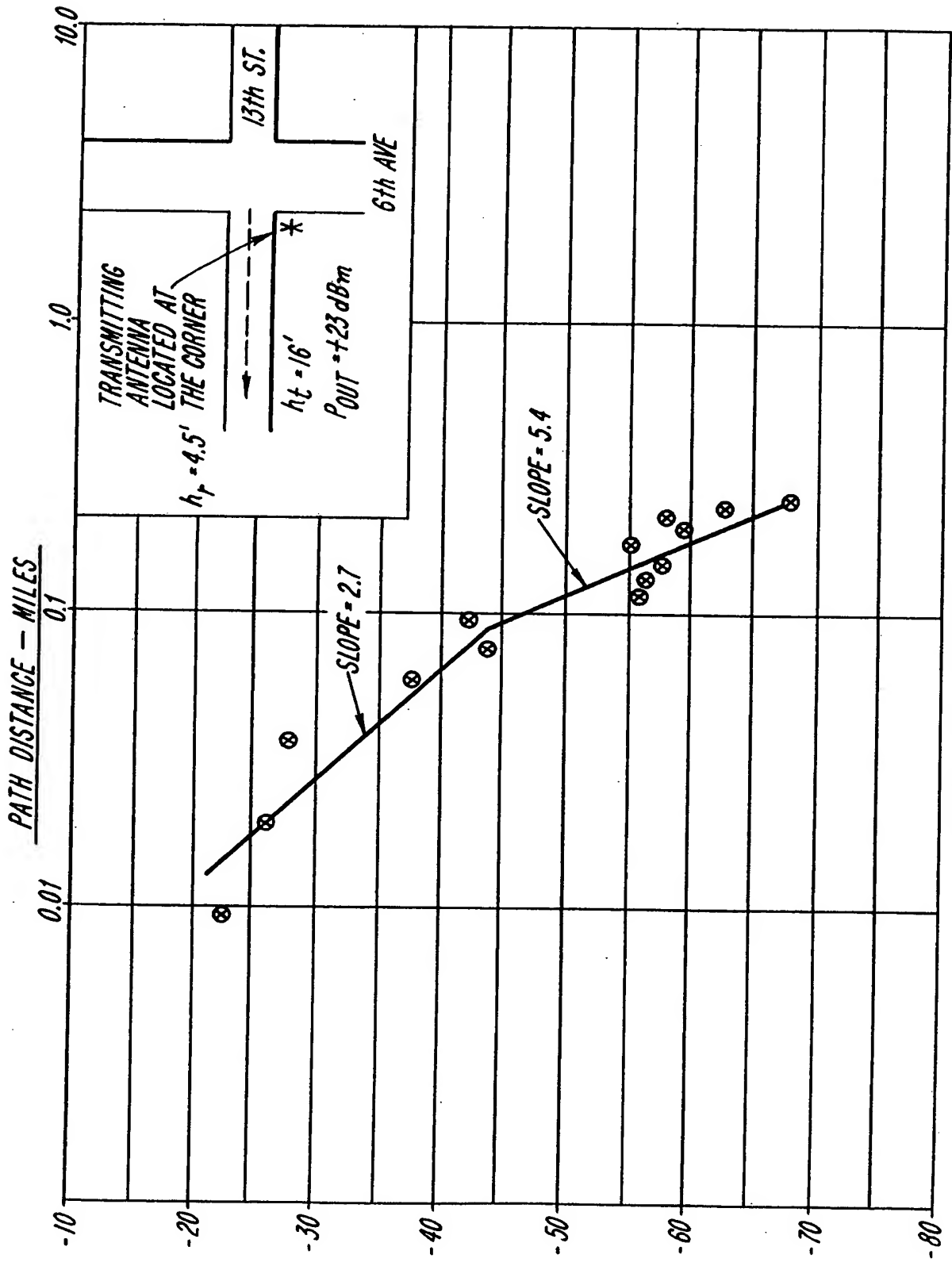


FIG. 17K



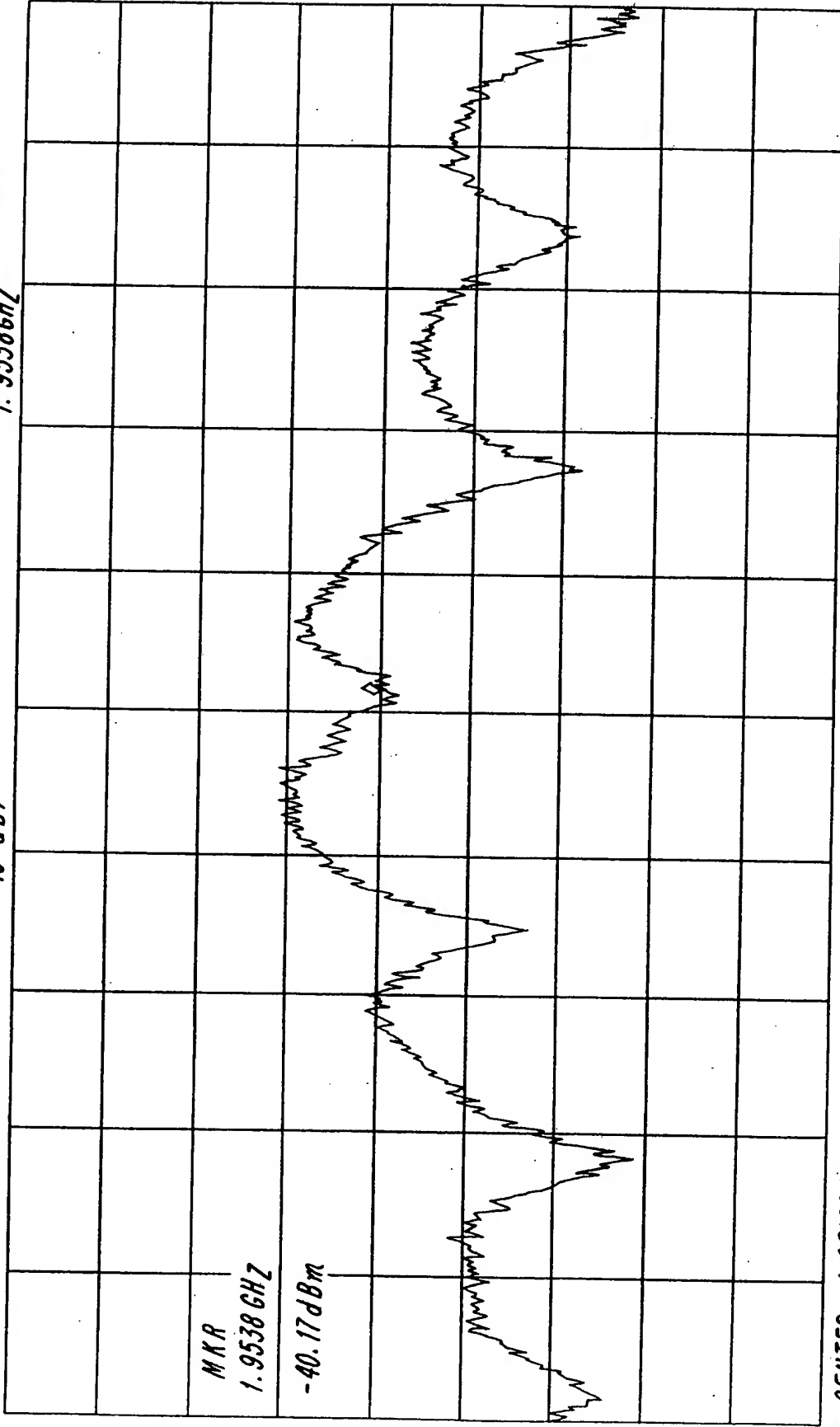
\*ATTEN 10dB  
RL 0dBm

MKR -40.17 dBm  
1.95386HZ

10 dB/

MKR  
1.95386HZ

-40.17dBm



CENTER 1.95106HZ

\*RBW 300KHZ VBW 300KHZ

SPAN 150.0MHZ  
SWP 50ms

FIG. 1B